VIRGINIA WILDLIFE

APRIL 2001 ONE DOLLAR

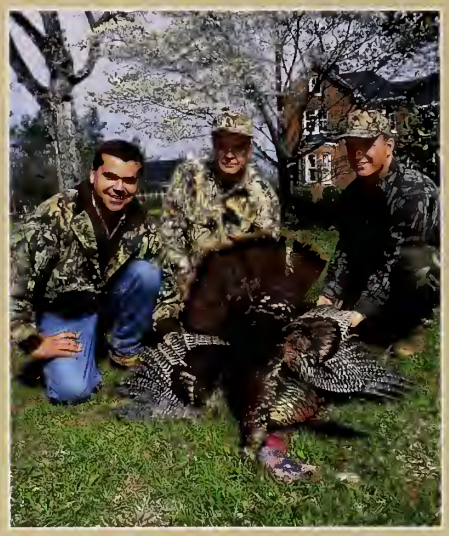
Director's Column

William L. Woodfin, Jr

With spring gobbler season just right around the corner, I wanted to take this opportunity to share one of my experiences from last year and how that experience made such a lasting impression on me.

It was the first week of the 2000 spring gobbler season, and I had been invited to the Halifax County home of James Edmunds. Mr. Edmunds is a farmer and wildlife conservationist whose family roots date back to the early development of the County. Also joining us that day was Patrick Popek, a member of our outdoor education staff and a longtime friend of Jameses. Patrick also provided us something else that was very important that day, and that was the gift of gab when it comes to calling turkeys. Patrick and James grew up in the area, and Patrick quickly offered to share his expertise when he learned that I was heading to his "home stomping grounds." As you might imagine, I thought it best to accept any offer of assistance when it came to "sweet talking turkeys."

Halifax County is located in south central Virginia where tractors, cattle, and tobacco plants still fill the landscape and farming is the business to be in. James, who has followed in the footsteps of his father, takes his farming seriously. Just as importantly though, he also has a tremendous love for wildlife. Over the years, James has worked closely with the Department of Game and Inland Fisheries to improve habitat on his farm. Not only does he plant commercial crops, he also sets aside areas for plantings that are beneficial to wildlife. He has made it a point to leave buffer strips of wild vegetation that give small animals and birds a place to rest, out of reach from predators. He has also limited the area on which he allows his cattle to graze, which has improved the water quality and plant growth in and along the streams that run through his farm.



***Left to right:** James Edmunds, William Woodfin, Jr., Patrick Popek, and a fine wild turkey that weighed in at just over 21 pounds.*

The spring gobbler season was only a few days old when Patrick and I made our way to a long, dirt road that led to a rustic, hand-hued cabin that James built himself. As the sun burned low in the western sky, James and his wife Jennifer greeted us with "Supper's on the table and morning will be here before you know it." With that in mind, we had a wonderful venison dinner followed by talk of wild turkeys and farming, and what seemed like only two hours of sleep.

With dawn just minutes away, we found ourselves standing on the edge of an old pine thicket where, for the past couple of weeks, James had been seeing a big old tom strutting his stuff through the woods. Patrick and I slipped through the woods to a small clearing where we found a pair of large oaks to break up our outline. As we started to set up, the sun began to stream through the woods and first light presented us with the perfect hunting location. We listened and Patrick broke the morning silence with a hoot from an owl call. Not a second later, a turkey cut loose with a gobble that set the hair on the back of my neck on end. Slowly putting down the owl call, Patrick placed an old, but seasoned, box call between his fingers and began to play a melody that was all too familiar to love-sick gobblers. The response was instant. No sooner had we called than the woods came alive with the crashing sounds of turkeys coming our way.

As fate would have it, the turkeys were coming straight in behind me, but in view of Patrick. Patrick stated with the most authoritative voice he could, "Don't move." For the next 15 minutes, Patrick and I had to listen to three gobblers strutting, drumming and gobbling without being able to move. After an eternity, I heard Patrick say, "He is coming round you, get ready." With a clear line of sight, I waited until the bird came into view. His display of feathers was a sight to behold and he was "gobbling to beat the band." The old tom stayed the course heading straight for us and it was obvious that he meant business as he approached.

It has been almost a year since my hunt with James and Patrick. In fact, just the other week I was called to pick up my turkey from the taxidermy shop, which I guess is why I wanted to share my experience just one more time. I once asked an expert turkey hunter what is the best camo pattern and his reply was, "Sitting still." How often that thought has echoed in my mind as I think back on this turkey hunt.

It's memories like this that make hunting and fishing so special. Opportunities to meet great people, to enjoy time in the outdoors, and yes, even once in a blue moon to harvest a spring gobbler. Turkeys are found throughout the Commonwealth in strong numbers and are considered to be extremely challenging to pursue. As with any hunting trip, it is important to always keep safety in mind. Remember to identify your target and what lies beyond your field of fire. While blending in with the natural surroundings plays an important role in hunting turkeys, it's still wise to wear blaze orange when entering or leaving the woods and displaying it wherever you set up.

I hope my hunting adventure has inspired you to consider spending some time in the woods this spring. If you are wondering where to go, just give our Department a call at (804) 367-9369 and we'll do our best to head you in the right direction.

Mission Statement

To manage Virginia's wildlife and inland fish resources to perpetuate populations of all species to serve the needs of the Commonwealth; to provide opportunities for all to enjoy wildlife, inland fish, boating and related outdoor recreation; to promote safety for persons and property in connection with boating, hunting and fishing.

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See why the living's good in Southwest Virginia in "Mountain Lake Conservancy" on page 10.

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Cover: Northern cardinal *(Cardinalis cardinalis)*, photo ©Kraig Haske

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Huntin' Gob

by Denny Quaiff

The gobbler sounded off again and I was afraid we might have gotten too close. My old hunting buddy, Bill Langford, whispered in my ear, "You set up next to that big pine and I'll be at the base of that big oak." Conversations like this take place daily between hunters in the spring during turkey season. However, this conversation took place during the opening week of spring gobbler season more than 19 years ago. We were hunting in Chesterfield County on property leased by the Spears Hunt Club. The two of us had been out scouting before daylight for the previous two weeks, and this was one of the gobblers we had located. If my memory serves me well, this old tom was "hot," shaking the trees with every resounding gobble from his roost. The old gobbler must have sounded off 25 times before we got into position. Bill gave the gobblin' tom several soft yelps, and the turkey cut him off with a double gobble that seemed to make the hair on the back of my neck stand up. In less than one minute, I glimpsed the turkey pitch down and without delay the gobbler almost ran over me. After 37 years of spring gobbler hunting, this 22 pound, 6 ounce long beard, still holds my personal record for the heaviest spring gobbler I have harvested to date.

It's spring gobbler time again, and like every season past, hunters will be looking for that extra edge to help them bag a wise ol' tom.

©Dwight Dyke

blin' Toms

Although this hunt turned out to be like, "Taking candy from a baby," it's rarely that easy. Veteran turkey hunters will testify that there is nothing more demanding and by, the same token gratifying, than calling a mature gobbler into shotgun range.

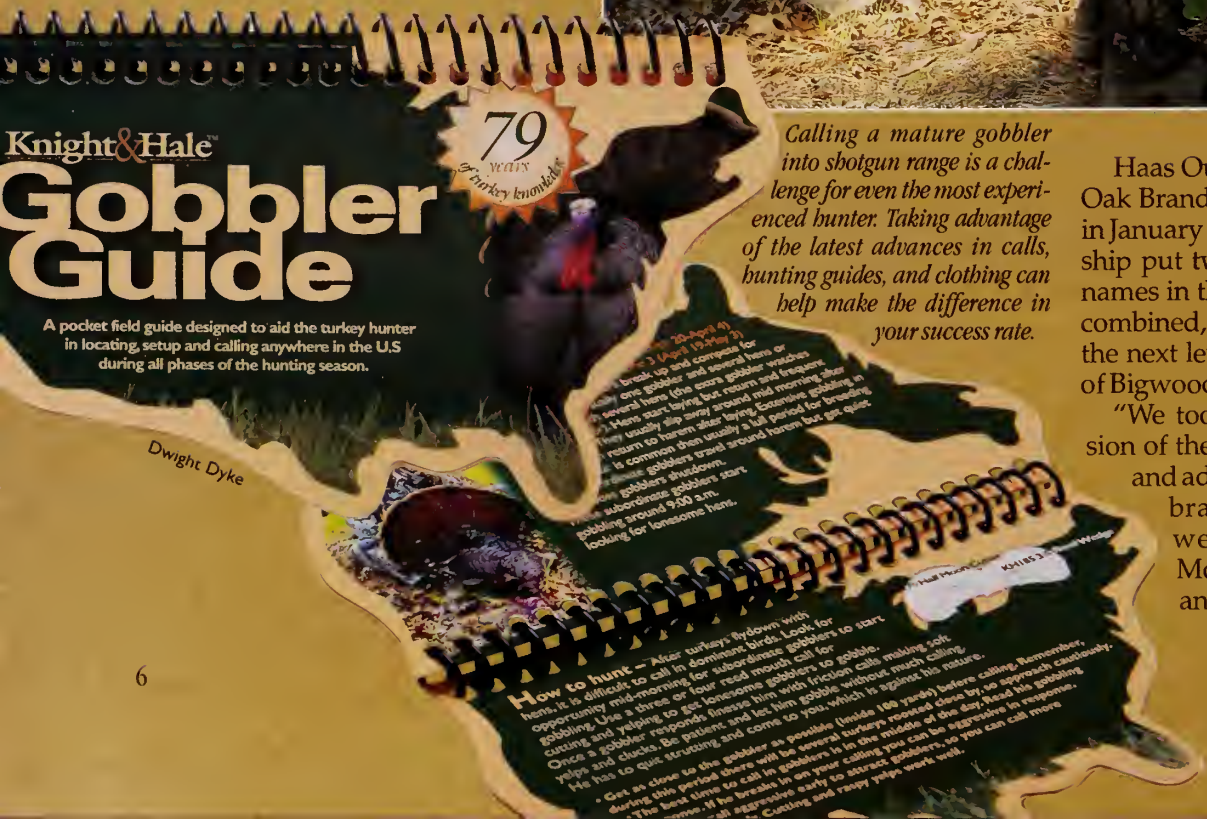
When spring gobbler season opens in Virginia on Saturday, April 14th, more than 68,000 gobbler hunters will be out in the predawn hours after this monarch of the spring woods. Today there are many hunting tools on the market to aid the spring hunter in his or her quest of bagging a wise old tom, and hunters continue to look for that extra edge to meet the challenge. The following is a short list of new products that can be found at your local dealer that, in this writer's opinion, deserve a close look.

Camouflage

More than two decades ago Jim Crumley introduced the original Trebark pattern. What Jim Crumley has done for the modern day camouflage industry, compares to what Fred Bear did for archery, and Tony Knight has done for muzzleloading. Jim Crumley is considered by his peers as the "father" of modern day camouflage, and again this year his Trebark camouflage sets an all-new standard of excellence.

©Denny Quaiff

Calling a mature gobbler into shotgun range is a challenge for even the most experienced hunter. Taking advantage of the latest advances in calls, hunting guides, and clothing can help make the difference in your success rate.



Haas Outdoors, creator of Mossy Oak Brand Camo, acquired Trebark in January 2000. This strong partnership put two of the most respected names in the industry together, and combined, they've taken Trebark to the next level with the introduction of Bigwoods.

"We took a simulated, 3-D version of the original Trebark pattern and added white oak leaves and branches to break up the wearer's outline." Larry Moore, Director of Research and Development for Haas

Outdoors, said. "Then we applied our shadow technology across the middle and around each element to add depth. The result was an all-new, state-of-the-art Trebark pattern that is both extremely effective in its own right and distinctly different from any other pattern on the market. From some of the photos we've taken of the pattern being worn in hunting situations, its effectiveness is really unbelievable. It's hard to tell where the trees stop and the pattern starts."

When I talked with Jim he said, "The introduction of Bigwoods reaffirms Trebark's legacy as the pioneer of modern camouflage." Jim continued, "I am just as excited about Trebark today as I was in 1980 and look forward to all of the challenges that lie ahead."

It goes without saying, in order to fool the eyes of a spring gobbler hunters must have the best in camo. Trebark's high standards have passed all tests, and I plan to give Bigwoods an honest try when the season opens.

Gobbler Locator

One of the greatest challenges of hunting in the spring is getting a gobbler to respond. Although many spring gobbler are taken each year that simply walk in and never say a word, hunters that pinpoint their turkey before setting up have a much greater advantage.

Quaker Boy, a longstanding leader in turkey calls has come out with their Hyper Hooter. The Hyper Hooter is a small compact gobbler locator with great volume. The rich green acrylic barrel and black stopper make this call very eye appeal-

©Scotty Lovett

Dwight Dyke

Owl and crow calls are an excellent way of locating roosting gobblers early in the morning.

ing. The design of the Hyper Hooter makes it one of the easiest reed-type owl hooters to master on the market today.

Each spring it appears that gobblers are becoming more aware of the same old locator calls in my bag. I believe this spring I will give the Quaker Boy Hyper Hooter a try and see if, just maybe, the gobblers will sound off and let me know right where they are.

Gobbler Guide

One of the most talked about ideas this year is the all new Gobbler Guide from Knight & Hale Game Calls. This information packed product offers the beginner, as well as the veteran turkey hunter, a compact, yet complete program in turkey transitions. Today much of the emphasis is placed on calling and not enough on knowing the ways of the wild turkey. Now the Gobbler Guide can put you where you need to be, and it offers hunters a much better chance of calling a gobbler into range. The Gobbler Guide comes with a 45-minute video and audiocassette describing in detail how to become a well-informed and accomplished turkey hunter just by knowing what makes a turkey tick! David Hale and Harold Knight are two of the most respected professional hunters in the world today. This Gobbler Guide, that can be carried in your pocket for close observation of what is happening in the field, totals 79 years of experience from these two master woodsmen.

The wild turkey has five noticeable transitions that occur during the spring, and the only variable is the change in the weather. Allowing a five-day margin of error from the start will keep you close to the noticeable changes a wild turkey goes through in a 75-day period.

After receiving my writer's package from Knight & Hale, that included the Gobbler Guide, I was very impressed with all of the valuable information the guide contained. When using this easy-to-read, pocket size booklet, hunters will simply need to determine the date they plan to hunt and match it with the zone and date found under the proper transition period. The Gobbler Guide will point out what you can expect to find turkeys doing when you hunt under these proper transition periods. No matter where you hunt in the U.S., a turkey is a turkey when it comes to changes from winter ways to spring breeding and back to fall patterns. The instructional Gobbler Guide would also be a great mechanism for Virginia hunters to use when planning vacation time for an out-of-state hunting trip.

Spring turkey hunters who know the five transitions, when to expect them to occur, and when to change their calling and hunting style will definitely be ahead of the game. I must admit, the Knight & Hale Gobbler Guide appears to have it all and will definitely be a welcome addition to the turkey hunter's bag of tricks.

Friction Calls

Will Primos has been turkey hunting for most of his life and is well respected throughout the industry for his outstanding line of turkey calls. For 2001, Primos Hunting Calls will have available the "Power Slot with Slate" and the "Power Slot Frictionate" turkey calls.

The "Power Slot with Slate" utilizes a Pennsylvania slate surface,

©Haas Outdoors

Dwight Dyke

Above: *Virginia's own Jim Crumley, foun of Trebark Camo, is co sidered to be the "F ther" of modern a camouflage. After mo than two decades of su cess, Trebark will introdu their all new "Bigwoods" patte for hunters this ye*

which turkey hunters have relied on to call up "Boss Gobblers" for more than 100 years. The "Power Slot with Slate" surface is easy to master for sharp yelps and cuts.

Another new addition to the Primos line of turkey calls is the "Power Slot Frictionate." With its hard, yet abrasive surface, which is easy to grip, the Hickory Striker is designed for simple calling.

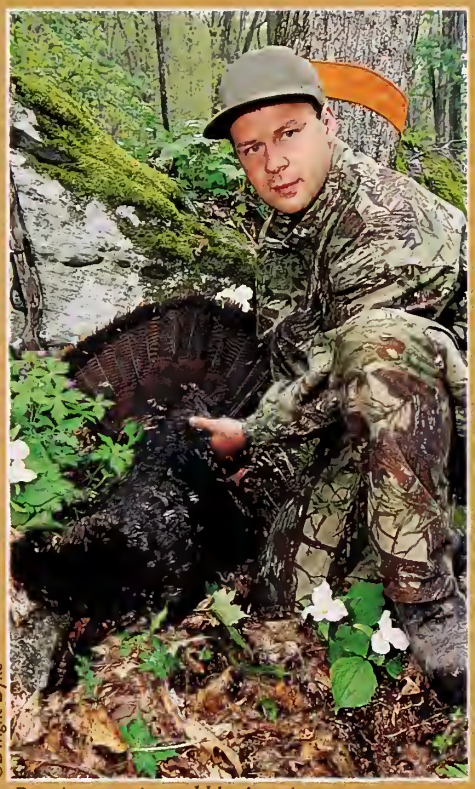
The slot-style design appears to have the versatility needed for easy handling. It is a known fact that the friction type slate calls have been a

favorite of turkey hunters since the beginning of time. It would appear that Will Primos and Primos Hunting Calls have taken an old standby to a new level of perfection. It is my plan to have both of these new calls in my vest on opening day.

Season Outlook

The 2001 spring gobbler season is shaping up to be another banner year. Gary Norman, the Department of Game and Inland Fisheries' Wild Turkey Project Leader, is very optimistic. Norman says, "The 1999 spring hatch was better than what we have seen in recent years, and that would mean we should have a good population of two-year-old birds to hunt." Norman went on to say, "The weather can always be a major factor, but with good hunting conditions the overall spring harvest should be another good one."

During our conversation Gary was also very complimentary of the hunting community, saying, "Virginia is richly blessed with a strong hunting community that supports wild turkey conservation efforts in the Commonwealth. Folks like Jim and Sherry Crumley of Trebark Camouflage, Jim Clay and Tommy Duvall of Perfection Turkey Calls, and John Byrne of Lowery, Virginia, for his line of turkey dogs, have all given their expertise and contributions to turkey hunting and conservation. But beyond these fine individuals, there are numerous others who have helped with the turkey conservation efforts in Virginia and who have made significant contributions through their involvement with activities, such as commenting on hunting regulations and participation in Department surveys (Spring Gobbler Hunter Survey)." Norman continued, "The Virginia State Chapter of the National Wild Turkey Federation has also contributed immensely to turkey conservation through their Super Fund Program which has helped fund projects to enhance habitats, buy equipment, fund research, and educate youth and women through their Jakes and Women in the Outdoors programs. Gary concluded by saying, "The Department would like to thank all the professionals, volunteers, and hunters who have made turkey hunting and its management in Virginia a success."



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Bagging a spring gobbler is quite an accomplishment. With approximately 68,000 sportsmen and women chasing long beards this spring, VDGIF data indicates that only one out of five hunters will enjoy success.

Conclusion

After looking at many of the new products for turkey hunters in the marketplace today and the favorable prospect of another good season, Virginia turkey hunters should bone up on their calling skills. Spring is always a beautiful time of year in the Old Dominion. The dogwoods and wildflowers begin to show off their magnificent colors, and the forest takes on a radiant new look. I can't imagine anything more satisfying than watching the sun rise in the eastern sky while listening to a gobbler sounding off. ☐

Denny Quaiff is an avid hunter and senior editor of Whitetail Times, *the official magazine of the Virginia Deer Hunters Association. For more information on the Association, write Virginia Deer Hunters Association, Inc., P.O. Box 34746, Richmond, VA 23234-0746 or check the VDHA Web site at:* ***www.virginiadeerhunters.org.***

There's a gem of a place that sparkles in the mountains of southwestern Virginia.

story and photographs by
King Montgomery

In Giles County, about 30 minutes northwest of Blacksburg, Mountain Lake sits quietly at the base of Salt Pond Mountain. One of only two natural lakes in the Old Dominion—the other is in the middle of Dismal Swamp—Mountain Lake was born of a giant landslide between 10,000 and 25,000 years ago.

Today, the 55-acre lake and the surrounding 2,600 acres of unspoiled mountain field and forest are part of the Wilderness Conservancy at Mountain Lake, a nonprofit organization established to manage the property and run environmental and cultural education programs. The Wilderness Conservancy—working with federal, state, including the Virginia Department of Game and Inland Fisheries (VDGIF), and local governments—strives to conserve the natural beauty and integrity of the ecosystem. By promoting environmental education, the Conservancy tries to instill in people the understanding that they are an integral part of the natural system (and the only ones who can destroy it all). At Mountain Lake the Conservancy, among other things, manages visits for young and old to experience nature and to help nurture personal and professional development.

Mountain Lake Hotel offers excellent accommodations (rooms or cabins), fine cuisine, and a variety of facilities with a range of services and amenities for the whole family. Activities on the Conservancy property include fishing (both in the lake and on nearby streams), boating, canoeing, hiking on 14 marked trails,

Mountain Lake

birdwatching, nature watching and photography, mountain biking, swimming in the lake or pool, and many more. Deer hunts are an option in the fall and winter as part of an effort to manage the large and healthy deer population at Mountain Lake. Or, just kick back on one of the lawn chairs in front of the elegant hotel overlooking the lake, and watch the world go by.

Lake Fishing

Mountain Lake is fed by runoff from rain and snow, and by a few springs that well up from the ground. Although the drought of the past three years has lowered the lake eight or nine feet, the beautiful deep blue lake still provides plenty of cool water for the rainbow trout, the largemouth bass, the rock bass, and the other fish, mostly redbreast sunfish and bluegill.

"How deep is it here?" I asked Jason Nikolai, the Director of the Wilderness Conservancy, as he stopped the stern-mounted electric trolling motor on the aluminum jonboat.

"About 60 or so feet," he answered, "and the trout are often feeding in the top few feet in the morning."

I cast a #12 Goddard Caddis on the 5-weight fly rod and let it sit, feeling ridiculous to be dry-fly fishing in over 60 feet of water. My gaze took me to the stately rock hotel, built in 1937 to replace the old wood structure, glowing majestically in the early light. I first remember see-

Left: *Mountain Lake is one of two natural lakes in Virginia. The other is located in the middle of the Great Dismal Swamp NWR and is called Lake Drummond. Whether you're fishing for rainbows on Mountain Lake or brook trout* ***(above)*** *on nearby Little Stony Creek, the angling opportunities can be spectacular.*

Conservancy

ing the hotel, cabins, and property in the 1986 movie, "Dirty Dancing," starring Patrick Swayze and Jennifer Gray, much of which was filmed here.

The rainbow took the fly in a savage attack that reminded me of a big largemouth bass blowing up on a popper. Stunned, I sort of set the hook and played the big fish for about 20 seconds before it spit the fly and went on about its business. But there would be more. You can use a fly rod for the catchable-size rainbows, which are stocked each spring, and many hold over for several years, growing to six and seven pounds. Or you can use spinning tackle and cast lures or bait to the agreeable fish. When fishing is tough, deep-trolling a spoon or spinner often takes fish. The hotel kitchen will prepare your catch for dinner that evening if you wish.

The shallows and drop-offs are home to largemouth bass and other sunfish that will take flies, lures, or bait. Look for submerged rocks, fallen trees, and aquatic vegetation; find the structure and you've found the fish. The bass tend to be small and skinny, but the bluegills and redbreasts can be trophy size. And I'll bet there are a few huge bucketmouths in the lake that have grown fat on trout.

No matter where you look in southwestern Virginia you're only a stones throw from enjoying a host of great outdoor experiences.

If you stay at the hotel, use of boats and canoes is included or you can fish from the banks. Day-trippers are welcome too, and permits and canoes are available for a reasonable fee. The recreation kiosk has all you need to boat or fish, including electric trolling motors, batteries, and personal flotation devices that are mandatory for all boat passengers.

In addition to the angling opportunities in the scenic lake, numerous nearby streams, such as Stony Creek and Little Stony Creek, are home to wild, native brook trout. The New River flows out of Claytor Lake and heads for West Virginia after passing through Pembroke at the foot of the mountain. It is loaded with quality smallmouth bass, muskellunge, and numerous sunfish. A little over an hour away is Dunlap Creek at Escatawba Farms, a superb fee-fishing area that works with the Mountain Lake recreation office to provide quality fly angling for brown, rainbow, and brook trout. These, and many other nearby streams, are great places to wet a line.

Little Stony Creek

Little Stony is representative of the brook streams in Southwest Virginia and in the extensive Jefferson National Forest. Fed partially by drainage from Mountain Lake, it flows out of the mountains, through Pembroke, and into the New River. Although there wasn't time on this trip to explore the New River, Jason and I were treated by having Harry Slone show us Little Stony Creek in the U.S. Forest Service's Cascades Recreation Area of the Jefferson National Forest.

Harry Slone wrote the popular book *Trout Streams of Virginia: An Angler's Guide to the Blue Ridge Watershed*. He works with the Conservancy at Mountain Lake and teaches fly casting and fishing, and guides on occasion as well. Little Stony is one of Harry's favorite creeks, a rare place where you can be alone in the middle of a bunch of people. Although it was a weekend summer day, we had the fishing to ourselves while many folks were taking advantage of the trails that run along the creek. This stretch of brook trout water is single-barb, artificial fly or lure only.

The Little Stony flows down its valley surrounded by apple and pear trees, native buckeyes, box elders, and walnut trees, and mountain laurel as large as trucks. Two miles upstream from the parking and picnic area is the 66-foot waterfall, where the stream drops out of the verdant mountain. This was the goal of the people walking up the trails. Harry showed us how to drop a small weighted nymph in the pocket water and along the deeper pools to catch the small, brightly-colored, scrappy brookies. We got the benefit of his expertise, and the hikers paused to take in the angling scene, integrated with the wild outdoors.

Dunlap Creek at Escatawba Farms

The Native American word "Escatawba" means "clear, running water," and that adequately describes Dunlap Creek as it flows serenely through Derrick Barr's property in the Alleghany Highlands, southwest of Covington. A little over an hour away from Mountain Lake, Escatawba Farms is home to large, healthy, and often hungry rainbow, brown, and brook trout eager to rise to fly or smack an underwater nymph or streamer. Escatawba is a fly fishing-only fee fishery open to the public on a reservation basis. In addition to the two mile stretch of freestone stream, there are several spring-fed ponds for the beginner or the stillwater enthusiast.

The creek holds primarily rainbow trout, some easily two feet long. They feed on the plentiful aquatic insects that hatch in the clear, green stream. The heaviest hatch of mayflies I've ever experienced was on Dunlap Creek one summer

Fishing is a family adventure while visiting Mountain Lake. That's probably why so many people return year after year.

evening. I had to stop my car and clean the front windshield so I could see to drive.

Escatawba Farms works with nearby lodging establishments, such as the Old Earlehurst and the Milton Hall Bed and Breakfast. It is less than 30 minutes from both the Homestead Resort in Hot Springs and the Greenbrier Resort in White Sulphur Springs, West Virginia.

I firmly believe that the future of much of our fishing opportunity lies in environmental and wilderness conservancies such as the one at Mountain Lake; in private fee-fishing areas such as Escatawba Farms where landowners take care of their ponds, lakes, and streams so that they and others can enjoy their bounties; in state and national parks and forests; and wherever possible, in hatchery stocking of public waters by VDGIF. The latter is tough, because public water is more prone to be polluted by industrial and agricultural waste products and damaged from development. But we can't afford to think that the problem ends there; some of our wild, mountain streams are suffering from acid rain from plants spewing toxins far away in other states.

Hopefully, there will always be a Mountain Lake, a Little Stony Creek, and an Escatawba Farms. After all, what good is our new amendment to the Virginia Constitution that guarantees our right to hunt and fish if there is no place left to do them in?

Mountain Lake and Area Information

The Wilderness Conservancy, at Mountain Lake and Mountain Lake Hotel. Call 1-800-346-3 3334 or see www. mountainlakehotel.com.

For Harry Slone's book or his videotape on trout fishing in Virginia, call (540) 981-0549 or e-mail biglaurel@aol.com.

Escatawba Farms (540) 962-6487 or see www.escatawbafarms.com.

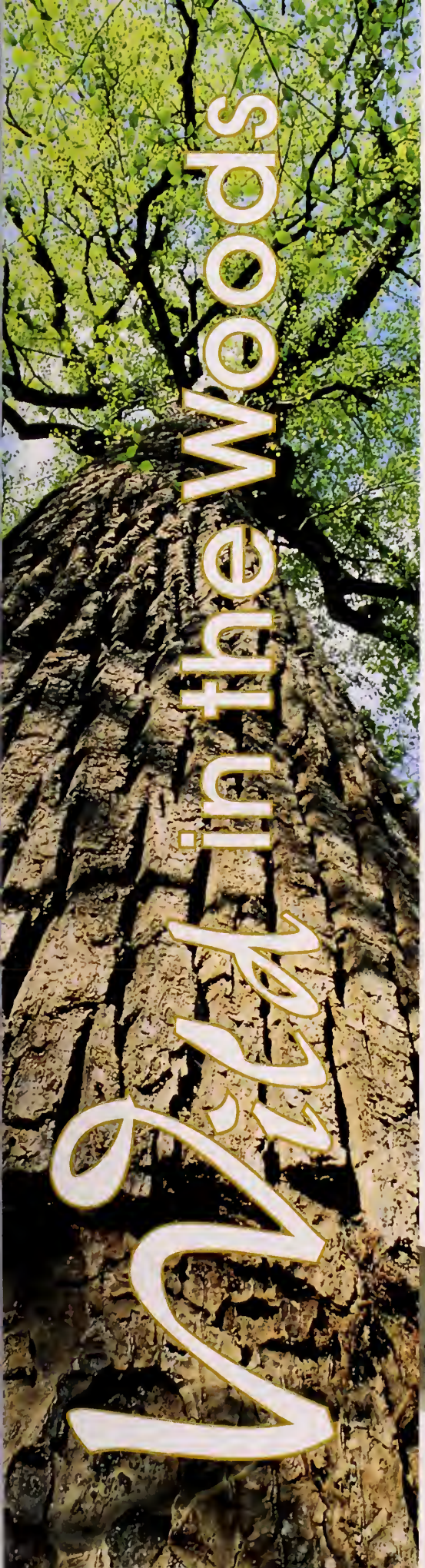
Friends of Mountain Lake (540) 626-5139. Help manage the Wilderness Conservancy.

Orvis Roanoke (540-345-3635) is the nearest full-service fly shop to Escatawba Farms. Dover England guides anglers to Escatawba and to other nearby waters.

Cascades Recreation Area. For information, call the Blacksburg Ranger Station, Jefferson National Forest at (540) 552-4641. □

A freelance writer/photographer from Annandale, King Montgomery is a frequent contributor to Virginia Wildlife.

Harry Slone, author of the book Trout Streams of Virginia *and the video "Southeastern Trout Streams," works a pocket of water with a nymph on Little Stony Creek.*



River of Life

by Carol Heiser and Sally Mills
illustrations by Spike Knuth

Rivers are stunningly complex natural systems, ever-changing the landscape while undergoing change by the natural cargo they transport. Step into a stream and marvel at the slow- versus fast-moving current, the frothy rapid, the shallow meander, and the central vortex of an eddy. Each part of a stream or river supports different aquatic animals uniquely adapted to survive the constantly changing conditions.

A Watery Web

Look carefully under the rocks of a stream in your neighborhood, or near your school, and you will find an interesting assortment of tiny creatures attached there. These aquatic insects are called *macroinvertebrates* because they lack backbones and are visible to the unaided eye. We call them *benthic* when they live on the stream bed or attached to plants or floating wood. Sometimes these benthic macroinvertebrates are collectively called *benthos*. They include the larvae of dragonflies, craneflies, damselflies, caddisflies, stoneflies, and mayflies, among others.

All inhabitants of the aquatic ecosystems are linked together in an elaborate food web. From the gentle *scraper* to the voracious *predator*, life in a river or

stream has a definite structure, and each group of organisms uses multiple types of food resources as they mature from young to adult. The "food" in the food web can include algae, decaying leaf litter, insects, small fishes, and plants.

Water that is free to flow, unburdened by toxicants or heavy metals and undue sediment loads, is critical to a properly organized food web. Many aquatic wildlife are highly impacted by pollution, and one particularly vulnerable animal is the freshwater mussel.

Mussels: Nature's Purifiers

Freshwater mussels are *filter feeders*—the natural purifiers of our river systems. They represent one of the longest living invertebrates on the planet (some more than 100 years!) and serve as food to muskrats, waterfowl, otters, and fishes. Rivers in southwest Virginia support the highest biological diversity of freshwater mussels in the world. The Clinch, Powell, and Holston rivers, that form the headwaters of the Tennessee River, are home to more than 50 different mussel species alone.

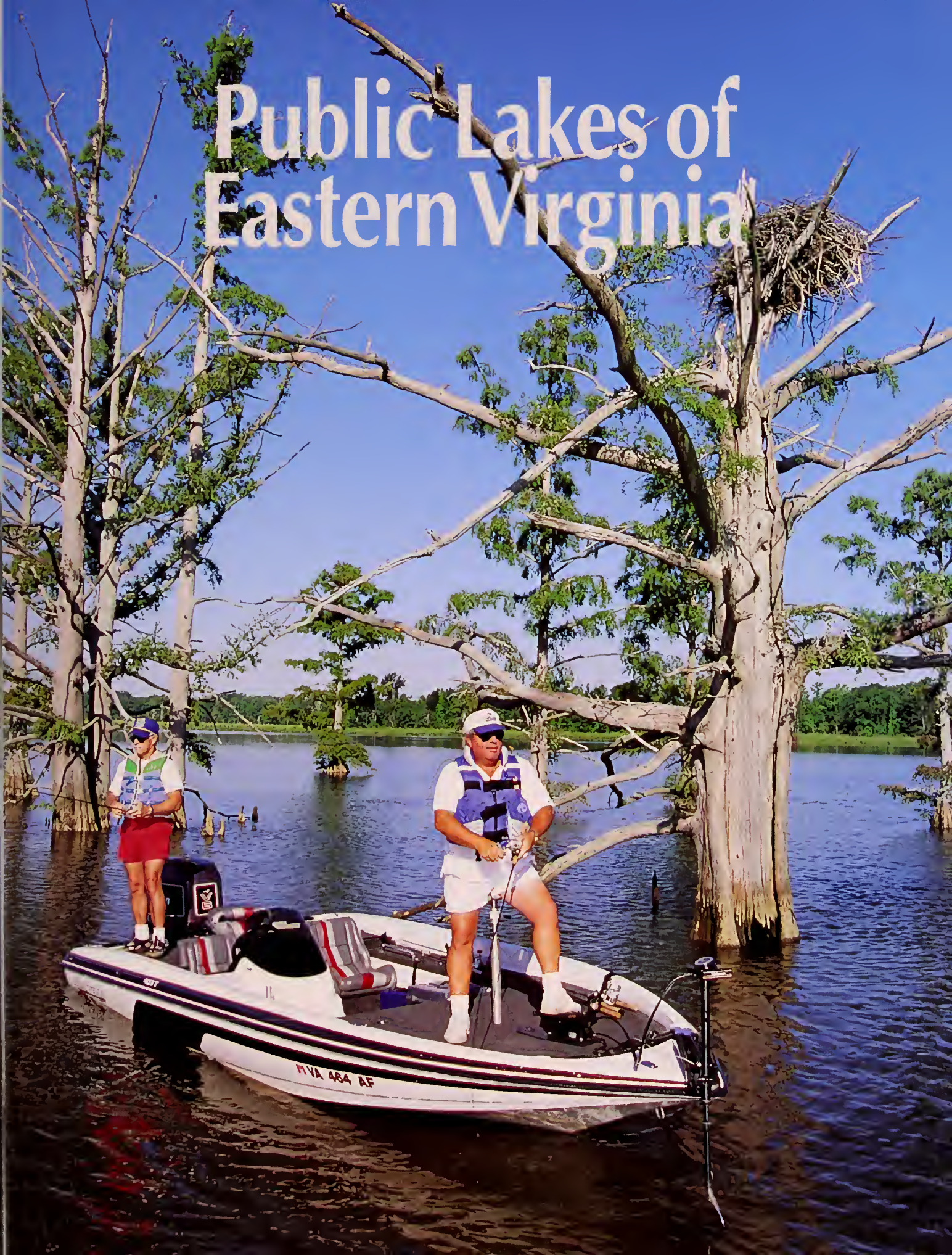
Mussels Hitchhike on Fish

Mussels are quite extraordinary in the way they mature. After fertilization, the female mollusk releases larvae into the water column that must attach to a suitable "host" fish, which temporarily fosters their transformation from larva to young mussel. The wavyrayed lampmussel *(Lampsilis fasciola)* uses the smallmouth bass to complete its development and hitchhike into suitable habitat. After several weeks, the young mussels detach from the host and continue their growth into adulthood as independent bivalves.

Continued on page 21

Top: *The fairy shrimp is one of the many inhabitants of the aquatic ecosystem, which is linked to an elaborate food web.* ***Above:*** *After fertilization the female mollusk releases larvae into the water were they attach to a host fish.*

Public Lakes of Eastern Virginia



Enjoy the great outdoors among the many public lakes of Eastern Virginia.

Local residents often best describe this picturesque section of Virginia as a series of peninsulas. There are the lower, middle, and the upper or northern peninsulas, and each is divided by and defined by two of four major rivers: the James, York, Rappahannock, and Potomac.

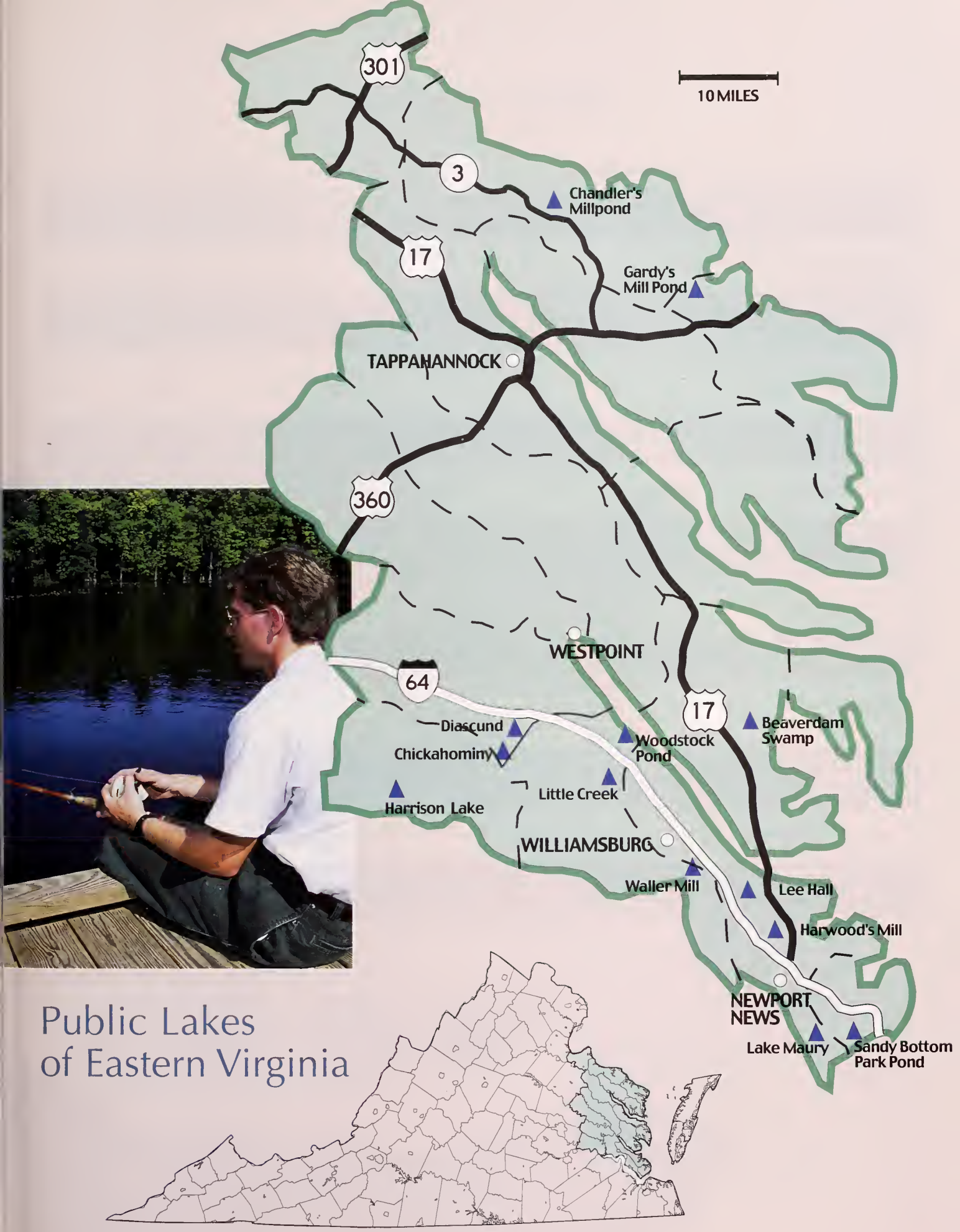
Public impoundments can be found throughout this area of Virginia, and most have heavily wooded shores, expansive marsh areas, and swampy thickets of bald cypress. All this makes perfect habitat for largemouth bass, crappie, panfish, and chain pickerel—and these lakes provide some of the best freshwater fishing in the state. Not to be outdone by fish, other wildlife abounds. It is not unusual to glimpse bald eagles and osprey frequently passing overhead, scanning the water for an unwary and very unlucky fish.

These lakes, as well as most of eastern Virginia, are just a "stones throw" from Colonial Williamsburg, Jamestown, and Yorktown—time capsules of our nation's past. Mix a lot of sport fishing and wildlife watching with a generous portion of sightseeing, add a couple days of flawless Virginia weather, and it will be the perfect vacation—a time to remember.

Bounded by rivers and bonded indelibly to the water, eastern Virginia offers a bounty of angling opportunities.

Left: *Eastern Virginia is blessed with a wide diversity of lakes and rivers like the Chickahominy River.* ***Above:*** *On a smaller scale, Beaverdam Reservoir Park in Gloucester County, offers amenities like picnic facilities, boat rentals, and handicap access for fishing. All photos ©Dwight Dyke.*

Public Lakes of Eastern Virginia



Eastern Virginia

Lake, Size & Location	Permit Req.	Boat Ramp	Picnic Facil.	Gas Motor	Boat Rental	Handi Facil.	Conces. Facil.	LMB BG	CF	CRP	SB	CP	NP	WE	YP
Beaverdam Swamp Reservoir (635 ac) Rt. 17 to 616.	Fee	●	●		●	●	●	●	●	●					
Chandler's Millpond (75 ac) on Rt. 3 just south of Westmoreland State Park.		●						●	●	●					
Chickahominy Reservoir (1,230 ac) I-64 east to Providence Forge (Rt. 60 E) off Rt. 649.	Fee	●		●	●		●	●	●	●	●	●			●
Diascund Reservoir (1,110 ac) I-64 east to Providence Forge (Rt. 60 E) off Rt. 603.		●						●	●	●		●			●
Gardy's Mill Pond (75 ac) Rt. 202 west of Callao.		●						●	●	●		●			
Harwood's Mill Reservoir (265 ac) Rt. 17-173.	Fee	●	●		WD		WD	●	●	●			●		●
Harrison Lake (82 ac) Rt. 5 to Rt. 658 (Harrison Lake National Fish Hatchery).		●	●	5 HP		●		●		●		●			
Lake Maury (165 ac) Intersection of Rt. 60 and 17.			●		●	●	●	●		●	●		●		●
Lee Hall Reservoir (230 ac) Rt. 143 Newport News. (757) 886-7912	Fee	●	●		WD		WD	●	●	●		●			●
Little Creek Reservoir (947 ac) Rt. 60 E to Rt. 603 to Rt. 610 E off Lakeview Drive.	Fee	●	●		●	●	●	●	●	●	●	●		●	●
Sandy Bottom Park Pond (12 ac) Intersection of I-64 and Big Bethel Road.			●		●	●	●	●		●					
Waller Mill Reservoir (360 ac) Rt. 143 to 645.	Fee	●	●		●		●	●		●	●				●
Woodstock Pond (7.5 ac) York River State Park east of Croaker Rt. 606			●		●		●	●							

Key

Fee - Permit available at Reservoir
PR - Primitive Ramp
WD - Weekends only

LMB /BG - Largemouth Bass/Bluegill
CF - Catfish
CRP - Crappie
SB - Striped Bass

CP - Chain Pickerel
NP - Northern Pike
WE - Walleye
YP - Yellow Perch

For more information contact:
VDGIF
5806 Mooretown Rd.
Williamsburg, VA 23188
757/253-4172
www.dgif.state.va.us

Virginia Department of Game and Inland Fisheries

Continued from page 16

This is one reason that freshwater mussels are disappearing at an alarming rate. The quality of the home waters affects not only the mature mussel but also the host fish upon which its dependence is vital. Certain minnows and darters, which serve as hosts to several mussel species, have been declining in the Clinch River system. Having fewer host fish means that fewer mussels will make the transition from larval stage to adult.

The Aquatic Wildlife Conservation Center

At the VDGIF Buller Fish Cultural Station in Marion, Virginia, efforts are underway to culture several species of freshwater mussels in hopes of replenishing their numbers across the Commonwealth. Biologists have been rearing several species at the hatchery for the past three years in a cooperative project with Virginia Tech, learning which environmental conditions and host fishes work best for optimum growth. Wildlife diversity staff, like biologist Monte McGregor, hope the research will assist with the recovery of many rare species, such as the tan riffleshell mussel, which is one of 18 federally endangered mussels in the region.

Below: *The smallmouth bass is often used as a host fish by wavyrayed lampmussel larvae. The larvae of the mussel will attach to the gills of the fish, remaining there until they transform from larva to young mussel.* ***Below left:*** *Hellgrammites which are referred to as benthic macroinvertebrates are an important food source of many larger fish like smallmouth bass.*

Did You Know?

Freshwater mussels were exploited at the turn of the 20th century for the pearls they produce, and they continue to supply the "seed" of the pearl in Japan's cultured pearl industry (Virginia's mussel populations are protected from harvest for the pearl trade). Before the widespread use of plastics in the 1940s, mussel shells were used extensively to make buttons.

Right: *Mussels, like the wavyrayed lampmussel, are filter feeders and act as natural purifiers of our river systems.* ***Below:*** *Before the use of plastics, freshwater mussels were harvested in great numbers for making buttons.*

What's in Your Stream?

Several excellent resources are available to help you learn—or teach—about the fascinating life in our streams and rivers. Here are some top picks:

Help Save America's Pearly Mussels—an information-packed, three-part educational resource produced in 1997 by the Department of Fisheries and Wildlife Sciences in the College of Natural Resources at Virginia Tech. A free, 16-page resource booklet is available only by downloading from their web site at **www.cnr.vt.edu/extension/fiw/** (click on Fisheries, then Streams and Rivers, then Publications). A full-color poster ($7) and a companion video ($10) are also available. Make your check payable to "Treasurer of Virginia Tech" and send to: Extension Distribution Center, 112 Landsdowne St., Mail Code 0512, Blacksburg, VA 24061 (phone (540) 231-6192).

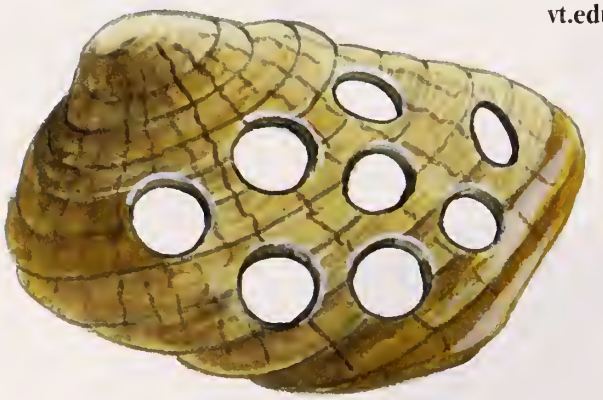
Pond and Stream Safari: A Guide to the Ecology of Aquatic Invertebrates—a 56-page educator's guide by Karen Edelstein, produced by the Cornell Cooperative Extension Service at Cornell University. The activity cards and lesson plans are for use with students ages 8–13, but the excellent drawings, work sheets, pull-out chart and checklist for recording data make this field guide and project manual a great tool for learners of all ages. $15.95. Distributed by Acorn Naturalists, 1-800-422-8886 or **www.acornnaturalists.com** .

Virginia Water Central—an excellent newsletter about aquatic issues, published bi-monthly by the Virginia Water Resources Research Center at Virginia Tech. For a free subscription, send your name and address to them at 10 Sandy Hall, Mail Code 0444, Blacksburg, VA 24061; phone (540) 231-5624. To receive the newsletter by e-mail, send your e-mail address to **water@vt.edu.** Or, visit their web site at **www.vwrrc.vt.edu** for back issues.

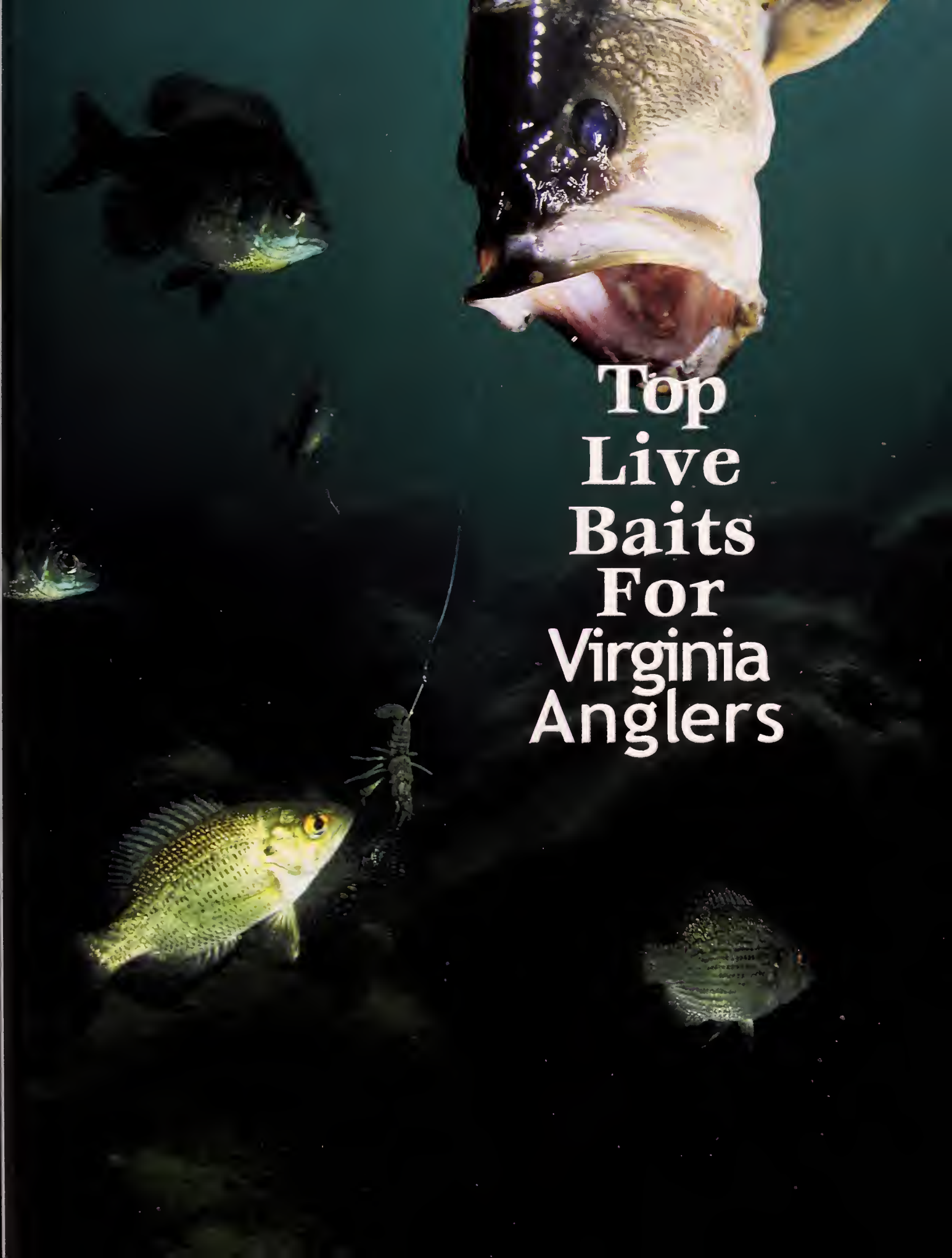
Poster Available—a teaching poster on *Benthic Macroinvertebrates* is available from the Virginia Department of Game and Inland Fisheries. Suitable for classroom use or group instruction, the watercolor poster illustrates common bottom-dwelling creatures and the habitats they occupy in streams and rivers. To obtain a poster and sample activities, please contact the wildlife education office in Richmond at (804) 367-6989 or 367-0188.

Virginia's Save Our Streams program—If you are curious about your stream's health and water quality, you might want to check into Save Our Streams (SOS), a citizen-monitoring program of the Izaak Walton League. SOS offers training and materials to get you started. For more details, contact Jay Gilliam, Program Coordinator, 7598 N. Lee Highway, Raphine VA 24472; or phone (540) 377-6179. □

Sally Mills is an outdoor writer and editor for Virginia Sea Grant *at the Virginia Institute of Marine Science.*
Carol Heiser is a Wildlife Education Specialist and coordinates the WILD School Sites program at the Virginia Department of Game and Inland Fisheries.



Virginia Naturally



Top Live Baits For Virginia Anglers

©Gerald Almy

There's nothing like the real "McCoy" when it comes to whetting the appetite of a hungry fish.

by Gerald Almy

Probing an underwater hump in Lake Anna, Bill Mathias and I slowly pumped our shiners back over the deep, offshore structure. Though we normally would have been using Hopkins spoons or jigs with pork dressings, today we had decided to go with the real thing—live wriggling minnows. Rigged on weedless hooks with a couple of split shot for weight, the offerings slithered back slowly as we crawled them over the bottom, just like you would fish a plastic worm.

Already we had caught and released a pair of 4-pounders and a 6, when suddenly another striking fish sent a *tap tapping* telegraphing up my graphite rod. Leaning into the fish, I stretched out the rod tip, waited until the slack was gone, then set the hook.

The heavy throbbing signaled another big bass. Just how large neither of us realized until minutes later when Bill reached down with the net and a largemouth, as long as a man's arm thrashed on the surface, just out of reach. Seconds before the bass slid over the net, the hook pulled free. The fish hung there for a brief, stunned moment, then dove back into the dark, deep water. Bill estimated the bass at well over 12 pounds from its length, which appeared to be at least two and a half feet.

That was the biggest largemouth I have hooked in my life, and I've never come across another one close to it since. But I bet if I do, chances are it will be with a live bait on the end of my line, just like the largest bluegill, pickerel, crappie, or striped bass one is likely to catch will also be on a live, natural offering.

With thousands of lures lining shelves of tackle stores, live bait would almost seem to be an anachronism for fishing in the 21st century. The truth is, it's not. While lure and fly-fishing are unquestionably effective and the most popular ways to go after gamefish today, live baits will often take more fish. That translates into more fun on the

©Dwight Dyke

©Gerald Almy

Collecting your own live bait, like worms, minnows, or crayfish, can be as much fun as catching the fish you're after. But before you head out, check the regulations regarding the possession limits for native and naturalized species found in the 2001 Virginia Freshwater Fishing Regulations.

water. If you're introducing a newcomer or youngster to the sport, bait will almost guarantee enough action that they'll like fishing and want to get more involved in it, gradually working into lure fishing and fly casting.

And like the big bass on Lake Anna showed, bait often fools the largest specimens of Virginia's popular gamefish. If you think bait fishing means impaling a crawler on a hook and lying back with your "pole" resting over a forked stick, think again. Using bait properly can be a challenging and engaging sport. Here's a rundown on five of the best offerings you can use for the Old Dominion's most popular sportfish.

Minnows

It's a fact of life in the aquatic world that big fish eat little fish. Bass, striper, crappie, catfish, walleye, rockbass, and pickerel are notorious for their fish-gobbling tastes. But even fish like trout and redbreast will grab minnows at times.

The simplest way to get minnows is to buy them at a bait store. Put them in a plastic foam cooler, a bait bucket that can be hung in the water, or a livewell in your boat.

If you want to catch your own minnows, seining is the best way. Find a small creek or shallow area along the edge of a lake and use a 4x8- or 4x12-foot, fine-mesh seine with weights on the bottom, floats on top and wooden handles on each end. Sweep slowly through the pool, then work into shallow water and lift the net. It should be alive with thrashing bits of silver. Dump the minnows in the bait container or bucket, returning any small ones. Cylindrical traps and umbrella nets are also effective for catching minnows when baited with bread, oatmeal or catfood.

©Dwight Dyke

Impale minnows through both lips from the bottom up, or through the back, using size # 2/0-6 hooks, depending on the size of baitfish and quarry you're going after. If the bait becomes lethargic, replace it with a fresh one.

Minnows can be fished in a variety of ways. Floating them beneath a bobber is an effective tactic in spring because so many fish are in the shallows and you can allow the bait to swim suspended near cover with this rig. This is a great technique for pickerel, bass, crappie, and catfish.

Drift fishing with minnows, using a couple of split shot or a dipsey sinker for weight, also works well, particularly for crappie. A method I often use is to cast and reel in a minnow as if it were a plastic worm. This gives you the wriggling appeal of live bait, plus the motion of a retrieved offering. This technique also works when you're fishing jigs sweetened with minnows—a hot strategy for walleye and pickerel.

Shad

Minnows are the indisputable best bait for shoreline-oriented fish, but shad are the top offering for larger quarries that roam the open water, such as striped bass. They're also excellent for big flathead and blue catfish, and don't be surprised to latch onto a few hefty largemouth with these baitfish as well.

Since they are a deepwater fish, the best way to catch shad is with a cast net. Search for shad in coves and near points, dams, and riprap along bridges. Another option is to go out

at night in areas where they are abundant and hang a lantern over the boat's gunnel. The shad will be attracted by the light and congregate beneath the boat; then it's simply a matter of throwing out the cast net and hauling them in.

Shad keep best in large, round containers, with aerated water. Adding a bit of rock salt, ice, and a chemical bait additive, also helps keep them perky. Shad can be fished many ways. If gamefish are shallow, drifting them beneath a cork in 4–10 feet of water can be very effective. Drift fishing or anchoring over structure are the top methods. Rig the shad on a #2/0-2 hook attached to an 18–36 inch leader. Tie the leader to a barrel swivel and thread an egg or bullet sinker onto the main line above that—usually .5-1.5 ounces is about right. Position this rig so that it's either a few feet off the bottom or wherever you've located fish on the depth finder. Striped bass, catfish, and the occasional bass will do the rest.

Madtoms

Also called "stonecats," these small catfish can tempt any good-sized gamefish, but they're especially effective on smallmouth in rivers. Some of the best places in Virginia for catching good numbers of smallmouth with madtoms are the Shenandoah, James, and New rivers.

Find riffles in rocky rivers and streams, and search for them by slowly lifting up rocks. You can either scoop them up with a small net or place a milk carton painted black inside next to the rock and they'll swim into it. Don't expect to find a madtom beneath every rock. They're not prolific. But if you turn over enough stones, you'll catch a sufficient number for a day's fishing. The baits are hardy and can often last through catching several fish. Better still, they are not attractive to small fish so almost every bite you get will be from a good-sized bronzeback.

These catfish have a mild poison in the spines on the top and sides; be careful when you handle them so you don't get jabbed. A pair of brown garden gloves works well with them. Keep the baits in a minnow bucket or plastic foam cooler and hook them through both lips on a size 1 or 2 hook. Since they head for the bottom, no weight is needed. Cast up and across and allow the tom to dive and drift with the current. When it crawls under a rock, tug it free. If no strike comes, reel in and repeat. When a fish takes, let it run several seconds, reel up any slack and set the hook hard. Work the bait near deep holes, ledges, logjams, undercut banks, and boulders in midstream.

Right: *Hellgrammites and (above) madtoms are excellent baits for a variety of fish, like smallmouth bass. Photos ©Gerald Almy.*

Hellgrammites

These ornery-looking critters are the larval forms of the dobsonfly. Measuring 1–3 inches, they're found in rocky rivers and streams, and are terrific baits for smallmouth, largemouth, spotted bass, panfish, catfish, and trout. A 1–2 inch hellgrammite works best for trout and panfish, and bigger ones for bass. These baits can be captured around the same rocky, riffled areas in streams and rivers where you find madtoms.

©Soc Clay

Lift rocks and scoop them up with a small dip net, or have one person spread a seine while another lifts rocks upstream, loosening the baits to drift down into the mesh.

Store hellgrammites in a container with leaves, bark, or sticks, and just a skim of water on the bottom. They'll stay lively for days like this if kept cool.

Use size 2–6 hooks and thread the point beneath the "collar" on the insect's back then out the other side. Add one or two small split shot for weight. Try fishing with and without a float to see which works best. If the current is slow or the water low, a bobber helps. Otherwise, simply cast the bait out and let it drift naturally.

Crayfish

Few gamefish can resist the scurrying action as well as the taste and scent appeal of these crustaceans. They're good baits for bass of all species, plus panfish, trout, and catfish.

Ponds and streams can both harbor crayfish, which are often found under rocks and debris or simply burrowed in the mud. Baiting a minnow trap with bread or meat will attract them, or you can use a dip net or a can with holes in it to catch them. Lift logs and rocks in shallow waters until you spot a crayfish, then put the net or can behind it. Push a stick in front of the crustacean and it will scurry backwards into the container. If you don't find many crayfish during the day, try this tactic at night with a flashlight. Crayfish can be kept in a foam cooler or bait bucket with a small amount of water and wet leaves.

©Dwight Dyke

©Gerald Almy

No matter what the time of year, live bait, like crawfish, will always prove productive when in search of hard to catch fish.

Pierce crayfish through the tail on a size 1/0- 4 hook and either drift fish or cast the bait to cover, such as rock piles, points, eddies, docks, islands, and dropoffs. If the water is deep, add a couple of split shot for weight.

Whether you're fishing a stream, river, pond, or lake, one thing is for sure, you will never know what you might catch when fishing with live bait. It's a 12-month-a-year method that can increase your odds of landing that really big one. ☐

Gerald Almy is a freelance outdoor writer and a field editor for Sports Afield *magazine.*

Be Aware

There are specific regulations concerning the use and taking of live bait in Virginia. Please check the current *2001 Freshwater Fishing Regulations*, page 32 under "Nongame Fish, Reptile, Amphibian, and Aquatic Invertebrate Regulations." Copies may be obtained by writing to: Information Desk, Virginia Department of Game and Inland Fisheries, P. O. Box 11104, Richmond, VA 23230-1104 or by call (804) 367-9369. Information is also available on the Department's Web site at: www.dgif.state.va.us.

Journal

VDGIF 2001 Calendar of Events

April 14–May 19: Spring Gobbler Season (Statewide).

April 21: *Women in the Outdoors*, Isaak Walton League Park, Winchester, Va. For information call Carissa Lee (540) 631-0118.

May 5: *Virginia Outdoor Day*, Belle Isle State Park, Lancaster County from 10:00 a.m.–4:00 p.m. For information call Hilary Welch (804) 367-6351 or the park at (804) 462-5030.

June 8-10: *Becoming An Outdoors-Woman*, Holiday Lake 4-H Camp, Appomattox, Va. For information call (804) 367-6351.

June 14th Deadline: *2001 Kids 'n Fishing Photo Contest*. For information call (804) 367-6778.

June 14th Deadline: *James River Fishing Challenge*. For information call (804) 367-8916.

June 23–24: *Wild for Wildlife Days*, 4-H Center, Front Royal, Va. For information call (804) 367-8999.

September 14–16: *Virginia Outdoors Family Weekend*, Hungry Mother State Park, Smyth, Va. For information call (804) 367-6351.

September 29: *Women in the Outdoors*, Izaak Walton League Park, Centreville, Va. For information call Linda Layser (703) 425-6665 or e-mail **rglayser@msn.com**.

October 5–7: *Virginia Outdoors Woman, Mother Daughter Event*, Appomattox, Va. For information call (804) 367-6351.

Additional information on VDGIF events can be found on the Department Web site at **www.dgif.state.va.us**. □

McConaughy Trout in Virginia

by Dan Genest

In the lexicon of diehard Virginia fly fishers, there are trout—rainbows, browns, and brookies, worthy adversaries to be sure—and there are McConaughies, the closest thing to a steelhead in the Old Dominion.

The Virginia Department of Game and Inland Fisheries started stocking McConaughy rainbows in Lake Moomaw nearly 20 years ago. "They are a strain from Idaho's Lake McConaughy," said Paul Bugas, a VDGIF fisheries biologist in the Verona. "The species has a reputation for growing fast and for getting to trophy proportions. We thought they would make an exciting fishery."

But the fishery never took off in the lake. "The fish are there; they get big, but not a lot of people have figured out how to go after them," Bugas said.

Each year the state stocks about 25,000 fingerlings in Lake Moomaw. Within two or three years they reach 15–16 inches. "They definitely run bigger than our average-sized, stocked rainbows. Fish over seven pounds are not unheard of," Bugas said.

But as if their size were not enough, McConaughies have another trait that sets them apart—wanderlust. "Unlike other strains of rainbow, McConaughies have a strong instinct to spawn," Bugas said. "In the past, we found fish all the way up into the headwaters of the Jackson River in Highland County."

That is a distance of more than 30 miles. And that urge to roam has spawned a legend in Bath County where the fish move up into the Jackson. From late February to mid-May, a cadre of dedicated anglers make the pilgrimage to Bath County in pursuit of "Big Macs."

"I have landed one and hooked another," said Jim Brewer, editor of *Virginia Outdoor Weekly*. "It is one of those moments in fishing that will stay with you forever."

"I have had them pop 3x tippet like it was sewing thread," said Jason Woods, a local fishing guide and manager of the Outpost, a fly-fishing shop in Hot Springs.

Good places to try for McConaughies include the stretch of the Jackson through Meadow Lane Lodge, Hidden Valley, and the special regulation section. Fish for them with big, heavy streamers along the bottom of deep holes. □

Wild for Wildlife Days

The Virginia Department of Game and Inland Fisheries is hosting its second annual Wild for Wildlife Days, a special event focused on the Commonwealth's wildlife. The family-oriented celebration will be held on June 23-24, 2001 at the Northern Virginia 4-H Education and Conference Center in Front Royal, Virginia. There will be

David Whitehurst

David Whitehurst

David Whitehurst

Top to bottom: *Snipping crayfish, toothy bats, and fast feather birds are only a few of the surprises one might find while attending this year's Wild for Wildlife Days.*

classes on birds, backyard wildlife, woodcarving, plant identification, river life, reptiles, wildlife rehabilitation, bats, nature photography, hiking, and much more. Classes will be interactive and mostly outdoors. Many classes will include live animals, field trips, and take home material. Professional biologists will be available to answer your wildlife-related questions. Exhibitors from a wide variety of nature and outdoor organizations will also be in attendance.

Pre-registration if received by June 12, 2001 is $25/family, $10/adults, and $5/children 7 to 12 years old. Registration after June 12, 2001 and on event day is $40/family, $15/adults, $8/children 7 to 12 years old. Children 6 and under are free regardless of registration deadline. Registration covers the entire weekend. For more information see our web page at **www.dgif.state.va.us** or call (804) 367-8999. □

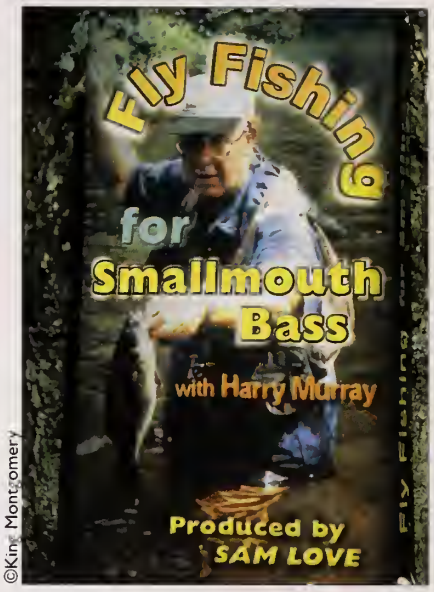
The Bronzeback Master Speaks

by King Montgomery

Fly Fishing for Smallmouth Bass featuring Harry Murray, 2001, Shenandoah Publishing Company, 40 minutes, $19.95.

When Harry Murray speaks about smallmouth bass fishing, we should listen, particularly if we want to catch more smallmouth bass with a fly rod. In the video, *Fly Fishing for Smallmouth Bass*, Murray demonstrates the tips, tactics, and techniques that make him one of the Nation's preeminent smallmouth experts.

The tape is set entirely on the water, actually in the water, as he wades his beloved North Fork of the Shenandoah River, near his fly shop and pharmacy in Edinburg, Virginia. Viewers learn the tackle, the rod, reel, leaders, and flies needed for smallmouth bass fishing. We also see the casting and presentation techniques for fishing nymphs, streamers, strymphs, and poppers.



©King Montgomery

This is a concise educational tape where all fluff is eliminated: the 40 minutes are devoted to showing and describing how to become a better smallmouth angler, and it is also entertaining because Harry is an interesting teacher.

Harry owns Murray's Fly Shop, gives regular classes in fly-fishing, and is the author of four angling books, and writes for a number of publications, including *Virginia Wildlife* and the *Virginia Fly Fishing Journal*. *Fly Fishing for Smallmouth Bass* can be ordered from Harry at (540) 984-4212 or from Shenandoah Publishing Company, P.O. Box 156, Edinburg, VA 22824 for $19.95 plus $4.00 shipping/handling. Virginia residents add 4.5% sales tax. The video is in sporting goods and fly shops throughout Virginia and available on the Internet at **www.amazon.com** or **www.bn.com**. □

Birds & Blossoms Spring Nature Festival

On May 3-6, 2001, the Norfolk Botanical Garden in Norfolk, Virginia, in partnership with the Virginia Department of Game and Inland Fisheries, will be hosting Hampton Road's first birding and nature festival. The festival features guided bird watching trips to sever-

al local hotspots, like Back Bay National Wildlife Refuge, and False Cape State Park, The Great Dismal Swamp National Wildlife Refuge, First Landing State Park, Craney Island, and Northwest River Park. There will be daily lectures and workshops, along with vendors of bird and nature-related products to update you on the latest in wildlife watching equipment. One of the highlights of the event will be an evening lecture by Don and Lillian Stokes, authors and hosts of the popular Stokes Nature Guide series. For more information call: (757) 441-5838 or check the Norfolk Botanical Garden's Web site at: **www.virginiagarden.org.** □

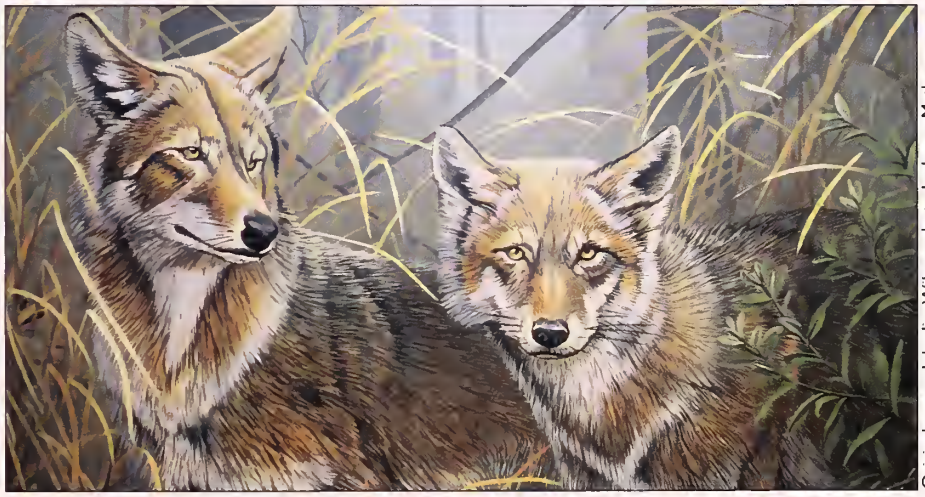
Operation Spruce-Up

Here's your chance to really make a difference by participating in Operation Spruce-Up. Operation Spruce-Up is a month-long campaign (running through April), to encourage Virginians of all ages to learn about, enjoy, and care for the state's natural resources. Now in its sixth year, Operation Spruce-Up has brought thousands of Virginians to donate time and resources to improve the quality of Virginia's lands, rivers, and streams, as well as the Chesapeake Bay.

Operation Spruce-Up is coordinated by the natural resource agencies of the Commonwealth, and it is supported by corporate and individual contributions. To participate in or contribute to Operation Spruce-Up, call 1-800-933-PARK. In the Richmond area you can call 786-5056. Visit the Operation Spruce-Up Web site at: **www.state.va.us/~der/temp/opersu.htm**.

While you're planting trees, tackling trash, or cleaning our streams you may want to bring your camera along and also participate in this year's Operation Spruce-Up Photography Contest. Photo contest categories include Scenic Virginia, Volunteers in Motion, and Team Award. Winners in this year's contest will receive prizes that include; a free weekend getaway at a state park cabin of your choice for the Best-In-Show; a photography field trip with a Virginia Department of Game and Inland Fisheries biologist for First Place; a $25.00 gift certificate from Richmond Camera for Second Place, and a one year subscription to *Virginia Wildlife* magazine for Third Place.

For contest rules write to Operation Spruce-Up 2001 Photography Contest, Attn: Dick Gibbons, Dept. of Conservation & Recreation, 203 Governor Street, Suite 302, Richmond, VA 23219 or call Dick Gibbons at (804) 786-4132. □



Original artwork by Jim Wilson, photo by Lowe Matheson

Born to be Wild

by Lowe Matheson

Now that spring has sprung there's no better time to head out for a little wildlife watching. But "wait" you say! You don't have a lot of time and you really don't want to drive to the ends of the earth to see a green-winged teal or take that perfect picture of a river otter. Then may we recommend an easy day trip to the Virginia Living Museum, in Newport News, Virginia.

Since 1987 the Living Museum has been home to over 171 species of animals and fish that are native to Virginia. One of the unique features of the museum is it offers visitors a chance to view Virginia's native species, like deer, otters, turkeys, and bobcats, in natural outdoor settings. A new feature that's sure to attract attention among wildlife watchers is the 5,000 square feet Coastal Aviary that contains up to 30 different species of birds, including waterfowl and shorebirds.

Another exciting event at the museum is an endangered species exhibit by world-renowned Virginia photographer and naturalist, Jim Wilson. Mr. Wilson's "On the Edge—The Plight of Endangered Species" will be on display at the museum until May 13. This gallery will contain a combination of information, artifacts, and paintings of endangered animals, such as the African mountain gorilla and the black-crowned night heron of Virginia. The exhibit will travel the country for the next two years—so try to "catch it" before it becomes extinct.

Other exciting summer programs include Safari Golf, Butterflies, Bugs 'n Blooms, and An Evening Under the Stars. For more information on the programs offered by the Virginia Living Museum call 757-595-1900 or see their website: **www.valivingmuseum.org.** □

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On The Water

by Jim Crosby, Region 4 Boater Education Coordinator

Why a Compass?

A boater should always carry a compass, even if you have a global positioning satellite (GPS) receiver. Even if you only boat on small bodies of water during daylight hours, a compass could save the day.

Whenever you go afloat, you should plan for the ultimate misadventure—like a long delay that could take you into the dark of night, or a sudden change in air temperature that launches airborne water vapor into a thick fog. Only two instances where a compass could become very useful. In poor visibility, you may have no other means of staying on course.

A smart boater knows the limitations of the magnetic compass, and operating within these, can trust it to guide the vessel to safety.

Boaters will make use of two different types of magnetic compasses—a handheld version and one permanently mounted onboard. The muscle-powered boater should carry a small, handheld version on his person. Use the handheld version with one word of caution, be very careful to ensure that it is not influenced by any nearby metal, and hold it away from your belt buckle.

A powerboat of 16 feet, or more, should have a permanently mounted compass that has been properly installed for true readings on the cardinal points. To be really effective and accurate, a magnetic compass must be located in a place of least influence from magnetic fields.

One day, I noticed that a friend's compass only deviated 90 degrees on a full 360 degree turn. We loosened his mount and as we moved the compass away, it spun to indicate a new direction. That told us his compass was definitely mounted in the wrong spot.

Magnetism can only be appreciated by watching its effect. It's a naturally occurring force essential to everything from complex electronic equipment to your boat's relatively simple magnetic compass. Magnetism is a physical force between two objects of metal where at least one has been previously magnetized to become a magnet. The area around a magnet in which its effect can be detected is called a magnetic field.

Every magnet, regardless of size, has two poles. These poles have opposite characteristics and are termed north and south. The basic law of magnetism is very simple: Opposites attract; likes repel. Thus a north pole is attracted to a south pole, but repels another north. This characteristic is very useful for determining direction. When a bar magnet is freely suspended in the earth's magnetic field it will align itself parallel to the lines of force of that field and thus indicate north and south.

The trick on a boat is to minimize the effects of the boat's magnetic fields created by large metal objects, like the engine and such. Fortunately, most boat compasses come with good directions for installation, orientation, and compensation.

While installation is obvious, orientation is the act of lining the compass up with the centerline of the vessel so that readings will reflect the direction of travel. Compensation occurs when you make adjustments to compensate for the boat's influence on the magnetic field surrounding the compass.

When you go boating, don't forget your compass, an essential piece of safety equipment that has served mariners for centuries! □

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RECIPES

by Joan Cone

Enjoying Wild Turkey Leftovers

Wild turkey fever is rising because efforts to increase the birds' numbers have been so successful in Virginia. The turkey population is about 400 percent higher than it was in 1943.

Because turkey gobblers are so large, you may well have leftovers. In the menu below, you will find a first-rate microwave recipe.

Menu

Eggplant Caviar
Individual Turkey Shepherd's Pie
Popovers
Apple Crostata

Eggplant Caviar

¼ cup olive oil
1 medium onion, finely diced
1 can (16 ounces) tomatoes, finely chopped and well drained
1 medium eggplant (about 1 pound), peeled and finely diced
1 green pepper, finely diced
2 tablespoons lemon juice
Salt to taste
½ teaspoon sugar
Freshly ground black pepper to taste

Heat the oil in a large skillet over medium-high heat. Add the onion and sauté 5 minutes. Add the drained tomatoes and sauté 5 minutes more, stirring often. Lower the heat to medium, then stir in the remaining ingredients. Cover the pan and cook about 20 minutes or until the eggplant is very tender. Stir occasionally. Remove cover and cook until all juices have evaporated, another 5 minutes or so. Purée half the eggplant mixture in a blender or food processor and return to pan. Stir very well to mix and then scrape into a serving bowl. Serve at room temperature with party-size pumpernickel or on toast points. Serves 6 to 8.

Individual Turkey Shepherd's Pie

1 cup milk
1 tablespoon flour
1 can (10 ¾ ounces) Healthy Request Cream of Chicken Soup
¾ teaspoon poultry seasoning
2 cups cubed cooked turkey
2 cups frozen mixed vegetables
2 cups stiff mashed potatoes
Paprika

In a microwave-safe bowl, stir together milk and flour until well blended. Stir in soup and poultry seasoning. Cover with a sheet of wax paper. Microwave on HIGH 7 to 8 minutes, stirring every 2 minutes until mixture boils and thickens. Stir in turkey and mixed vegetables. Spoon 1 cup turkey mixture into each of 4 individual microwave-safe baking dishes. Pipe or spoon ½ cup potato mixture over top of each casserole. Sprinkle with paprika. Cover with wax paper. Microwave on HIGH until heated through, 9 to 11 minutes. Makes 4 servings.

Popovers

1 cup flour
½ teaspoon salt
2 eggs
1 cup milk
1 tablespoon salad oil

Preheat oven to 450° F. Grease popover pans and set aside. If glass or earthenware cups are used, place these on a baking sheet in oven to heat; remove and grease just before filling. Measure all ingredients into a bowl and beat with a rotary beater until mixture is very smooth. Fill cups a little less than half full and bake in the preheated oven without peeking—about 35 minutes or until the sides are rigid to the touch. If drier popovers are desired, pierce each one with a knife and bake 5 minutes longer. Makes 6 to 8.

Apple Crostata

Here is one of those excellent recipes found inside the Pillsbury Refrigerated Pie Crust box.

1 refrigerated pie crust
½ cup sugar
4 teaspoons cornstarch
2 teaspoons cinnamon
4 cups thinly sliced peeled apples
1 teaspoon sugar
2 tablespoons chopped pecans or walnuts
Whipped cream or topping.

Preheat oven to 450° F. Bring pie crust to room temperature. Unfold crust and place on an ungreased cookie sheet. Press out fold lines. In medium bowl, combine ½ cup sugar, cornstarch, and cinnamon; mix well. Add apples and toss gently. Spoon apple mixture onto center of crust, spreading to within 2 inches of edges. Fold edges of crust over filling, ruffling decoratively. Brush crust edge with water and sprinkle with 1 teaspoon sugar. Bake at 450° for 15 minutes or until crust is golden brown. Sprinkle pecans over apple mixture. Bake an additional 5 to 15 minutes or until apples are tender. Serve with a whipped topping. Makes 6 servings. □

Backyard Wild

by Marlene A. Condon

Putting in a Small Artificial Pond for Wildlife (Part II)

It is important to locate a pond in a fairly level spot where runoff from the yard will not be a problem. This is especially important if you use pesticides on your lawn grass or other plants (although it would be preferable to eliminate all pesticide use in a wildlife habitat).

Do not make the liner edge flush with the surrounding land as this makes it easier for dirt and other debris to wash into the pond. Instead, make the edge an inch or so above the soil surface and cover the edge with rocks or plants if you do not like its visibility.

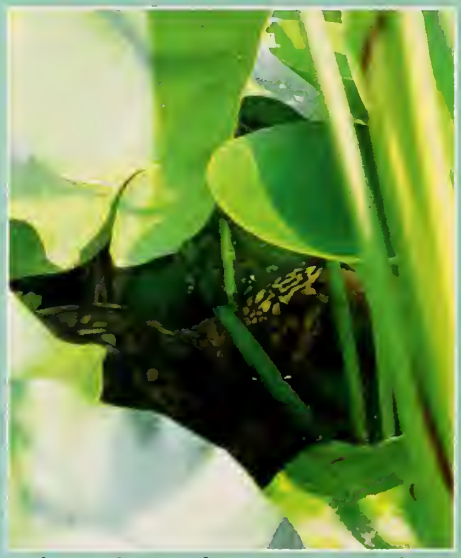
The pond does not have to be very wide to support wildlife (3–4 feet will do), but a section of it should be at least 18–24 inches deep so that it will not all freeze during the coldest months of the year. Preformed liners usually have a very deep area in the middle of the pond and a shallower area near the edge.

When deciding what water plants to grow, take the pond depths into account. Some plants prefer deep water while others require shallow water.

Hardy water lilies are beautiful plants that require deep water for their survival. They come in a variety of colors that will delight your eyes and they make floating leaves that frogs love to rest upon.

It is extremely important for you to buy submergent plants that grow under the water surface as they provide oxygen to the animals living in the pond. Anacharis resembles seaweed and does so well in small ponds that you usually have to throw some of it out every year.

Within a few weeks of setting up your pond, you will probably begin to see signs of animal life. From insects, such as water striders that skate upon the water surface, to newts and frogs that will sun themselves on the surface or peek up out of the depths, your artificial pond will quickly become home to a variety of fascinating creatures. By watching them you can learn much about life in the water! ☐



Left: *A male green frog rests upon Anacharis, an underwater plant that provides oxygen to pond water.* ***Above:*** *Water lily leaves offer shade for many small animals like this box turtle.* ***Right:*** *If your pond has large rocks lining the perimeter, the common redback salamander might be found "hanging out" underneath them. Photos ©Marlene A. Condon.*

Naturally Wild

story and illustration
by Spike Knuth

The Cardinal
(Cardinalis cardinalis)

There are few songbirds that so quickly gain a person's attention than that of a cardinal pouring out its powerful, but pleasant whistling calls. The male cardinal will reserve his best performance for spring, and even the female will sing on occasion. The cardinal is also known as the "redbird" and is so popular that many states have named it their state bird, including Virginia.

The cardinal is abundant in the South, to the point of being a common everyday sight. The bright red male has darker or duller back coloring with a rich, black face and chin patch. The female varies in color from yellow-brown to grayish-olive, with reddish wings and tail, and a dark face patch. Both sexes are crested with short, rounded wings, long tail, and thick, conical-shaped bills that are red or red-orange in color.

Anyone who stocks a feeder consistently in winter may be surprised to find a yard full of cardinals. It's not unusual to have six or more, bright red males, along with a female or two, feeding daily in the yard. In some cases, the cardinal flock may be the young of the year from a number of broods still traveling with their parents. As spring approaches, the resident or dominant male becomes edgy with all the added competition and he begins driving off the younger males so he is free to court his lady again. About the first week of February he will bring her small gifts of food.

Cardinals are at home in a variety of habitats, including dense thickets and tangles near open areas, field edges, woodland margins, along streams, in open swamps, and in park thickets. By planting fruit-bearing and dense shrubs, you can create a refuge in your own yard and attract cardinals. In early April, the female will begin building a nest, usually located low in second-growth thickets of shrubs, like forsythia, pyracantha, and holly, or in small trees. It is a loosely constructed affair of small twigs, strips of bark, weed stems, grasses, and is lined with fine rootlets and hairs. Two to four light bluish or greenish eggs are laid, mottled with chestnut or purple. Two broods are raised, with the male completing the feeding chores for the first brood while the female begins her second brood. Once raised to maturity, the cardinal brood may stay together or join others as a loosely associated flock.

In summer and fall they will feed on insects, weed seeds, wild berries, and other fruits. With the coming of winter you won't hear the cardinal's song, just the harsh "chek-chek" call. They come to feeders regularly, with a special liking for black, oilseed sunflower seeds as well as the old larger, gray stripe variety. □

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